



Application for Certification - Part 1

Test Group (FOI)

- **Model Year:** 2027
- **Manufacturer Name:** Kia Corporation
- **Test Group:** VKMXJ01.6P13
- **Test Group Description:** 1.6 Liter / I4 Turbocharged GDI / Otto-cycle
- **Durability Group:** VKMXR0135P1G
- **Durability Group Description:** Monolith, WU-TWC + TWC
- **Vehicle Class:**
FED : LDV/LDT2
CAL : LDT
- **Applicable Standards:**
FED: Interim Tier-4 Bin30 / Interim Tier-4 Evap
CAL: LEV-IV SULEV 30 / LEV-IV Evap
- **Vehicle Tested:**
Exhaust EDV - NQ5-KU6G6HA302A/0
Evap EDV - MQ4U1G6HA581F/0
FEDV - NQ5-KU6G6HA304F/0
NQ5-KU6G6HA304F/1
- **Carlines Covered by Certificate:** Sportage Hybrid AWD, Sportage Hybrid FWD
- **EPA Response Requested by:** Feb 28, 2026
- **For Questions, Contact:**
Stephanie Wright
Tel: 734-273-1904
E-mail: swright@hatci.com

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01.00 Correspondence and Communications

Please refer to Common Section 01.00.

For questions, call Stephanie Wright (734-273-1904).

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Revised:

02.00 Durability Group Description

1. Durability Group Name : VKMXR0135P1G
2. Combustion Cycle : Otto cycle / four stroke
3. Engine Type : Piston / water cooled
4. Fuel Used : Gasoline
5. Basic Fuel Metering System : Direct Injection
6. Catalyst Construction and location : See Section 02.02
7. Precious Metals in Catalyst : See Section 02.02
8. Precious Metal Loading for all Catalysts in the Durability Group : See Section 02.02
9. Range of Catalyst Grouping Statistics : See Section 02.02
10. Type of Particulate Filter : None
11. Battery Capacity(s) : 5.5Ah
12. Battery Chemistry(s) : NCM*1
13. Battery Duty Cycle Usage(s) : 20 years / 300,000km
14. Battery Manufacturer : Hyundai Mobis
15. Battery Construction : 9 modules with 8 cells each (72 cells in total)
16. Battery Self-Discharge Information : < 5.0% @SOC70%, RT for 6 months
17. Description of the Thermal Management System
The thermal management system for the battery is an air-cooling system, in which cabin air is blower through an inlet duct by cooling fan mounted in battery pack and expelled to outside through an outlet duct.
18. Battery Disposal Plan : Please refer to Common Section 02.00

(Note) *1 : Nickel Cobalt Manganese

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02.01 List of Vehicles in Durability Groups

Please refer to Common Section 02.01.

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03.00 Evaporative/Refueling Family Description

03.00.01 Evaporative/Refueling Family Name: VKMXR0135P1G (21MY Sorento HEV C/O)

03.00.01.01 Evaporative/Refueling Family Parameters

1. Type of vapor storage device: Canister (1EA), Air cleaner (1EA)

2. Basic canister design

Evap. code	Absorption flow rate (g/hr)	Nominal working capacity (g)	Size (cc)	Material	Medium	Nominal fuel tank capacity (gal)
135P1G	15	135	2250	Plastic	Activated Carbon	13.7

3. Fuel system: Returnless fuel system

4. Type of refueling emission control system: Integrated type

5. Fillpipe seal mechanism: Liquid seal type

6. Vapor control system or method of vapor line to the canister:

- Fill Limit Vent valve (ORVR)
- Overfill Limiter (2way valve)
- Evaporative Leak Check Module

7. Purge control system

- Type of valve: Duty
- Purge control strategy: Controlled by ECU
- High load purge system : No
- Active purge system : Yes

8. Vapor hose material: Rubber

9. Fuel tank material: Plastic

10. HC-Trap:

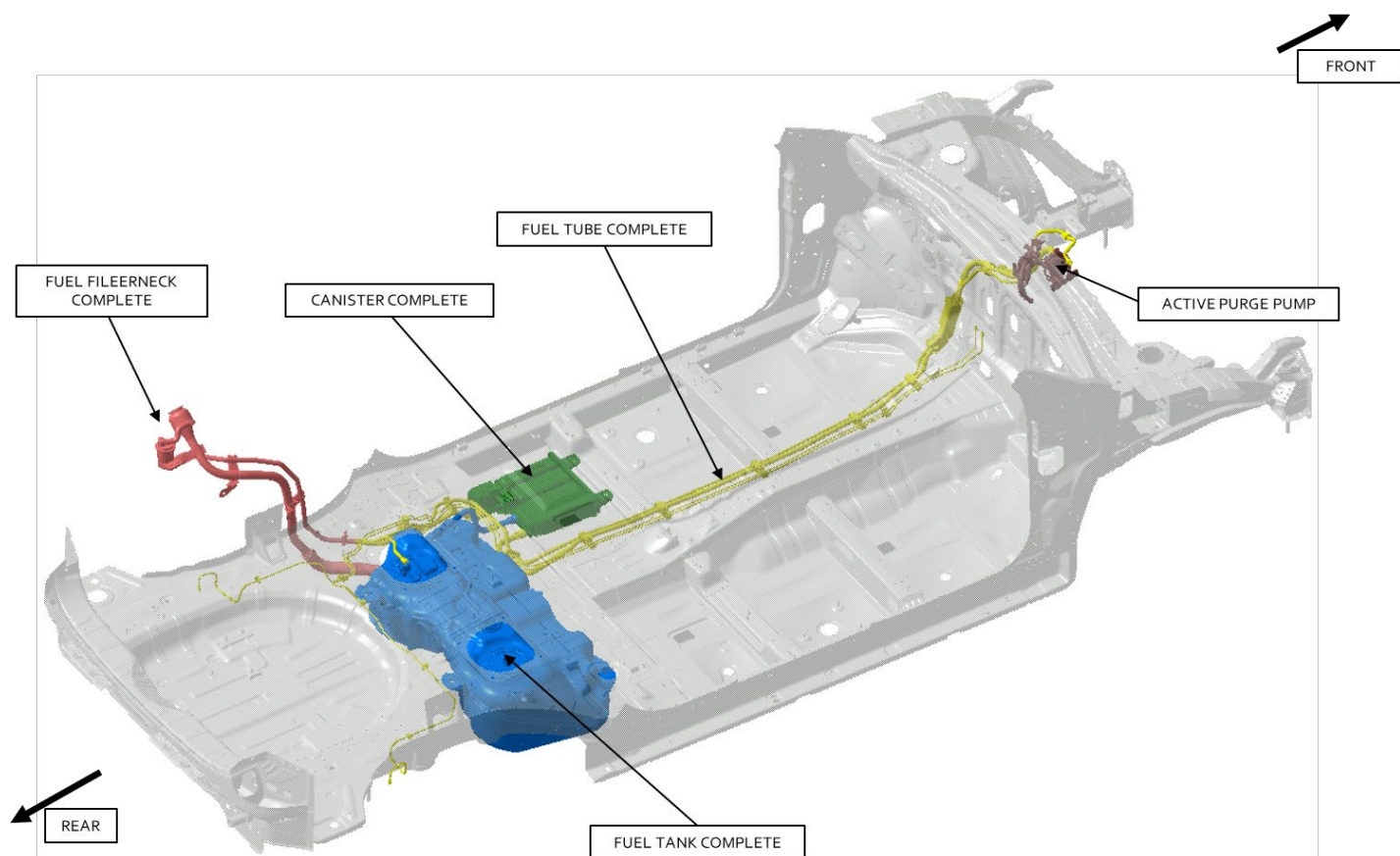
- Media: Paper containing activated carbon
- Working capacity: 0.5g

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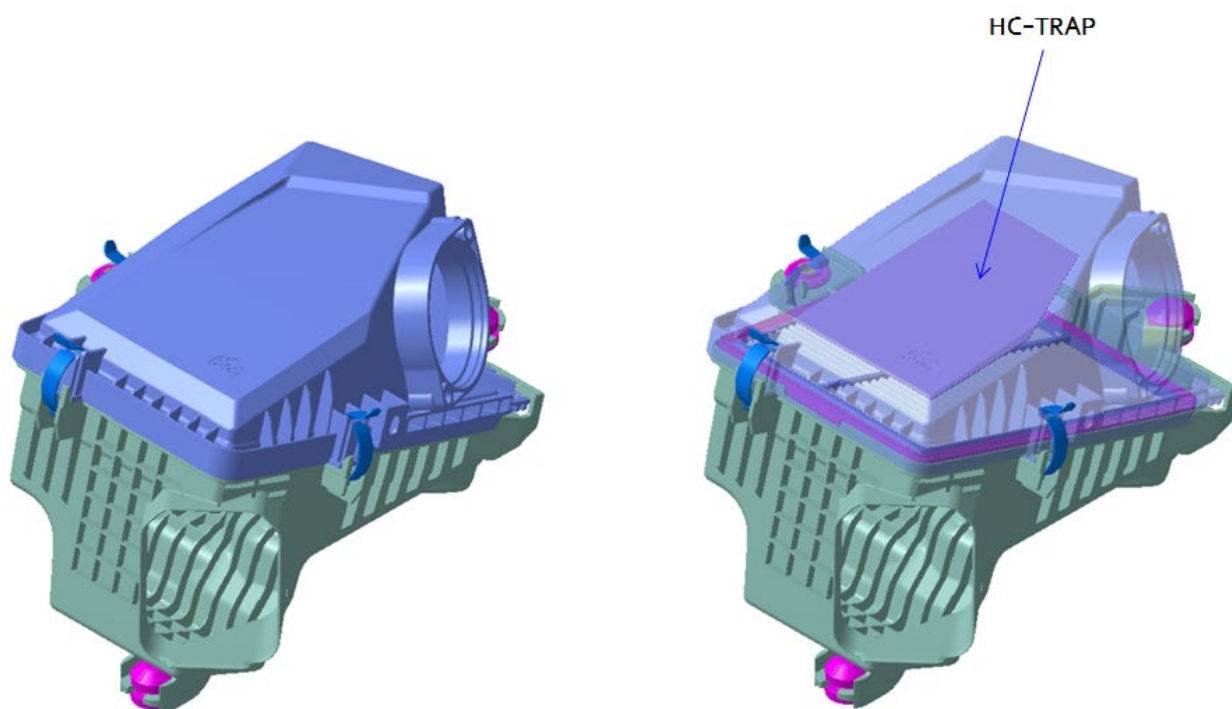
Revised:

03.00.01.02 Evaporative/Refueling Schematic



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Revised:

03.00.01.03 HC-TRAP Schematic



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03.01 Evaporative/Refueling General Description

Please refer to Common Section 03.01.

03.02 List of Vehicles in Evaporative Families

Please refer to Common Section 03.02.

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05.00 Test Group Description

Test group name	:	VKMXJ01.6P13
Engine displacement covered	:	1.6 L
Electric motor capacity	:	47.7 Kw @1800~2100 rpm
Voltage	:	270 V
Type and size of electric motor	:	Permanent magnet synchronous motor 3.82 L
Battery capacity	:	5.5 Ah
Voltage and type of battery technology	:	270 V, Lithium ion (LI+)
Arrangement/Number of Cylinders	:	I4
Vehicle Class(s) Covered	:	LDV/LDT2
Sales Location/Emission Standard	:	FED : Interim Tier-4 Bin 30 CAL: LEV-IV SULEV 30 See CSI report for emission standard levels

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06.00 Test Vehicle Description

Exhaust Durability Data Vehicle

Verify Processing Report

Total Datasets Submitted: 1
Accepted Datasets: 1
Rejected Datasets: 0

The original datasets are listed below. In addition, any information generated by the Verify system is also included. For any rejected datasets, the reason(s) the dataset was rejected is provided below in the Transaction Report for that particular dataset.

TestVehicleInformationSubmission

TestVehicleInformationDetails

InformationProcessCode : C
EPAManufacturerCode : HYX
VehicleIdentificationText : 5NMS21A1BN1P98405
VehicleConfigurationNumber : 0

VehicleConfigurationDetails

VehicleDescriptionDetails

ManufacturerVehicleConfigurationNumber : 0
TestGroupName : RHYXV01.6M13
EvaporativeRefuelingFamilyName : RHYXR0137M1G
LeakFamilyIdentifier : MXH
LeakFamilyName : RHYXR0137M1G-MXH
ModelYear : 2024
ActualTestVehicleMakeText : HYUNDAI
ActualTestVehicleModelText : SANTA FE HYBRID

DriveSourceDetails

DriveSourceIdentifier : E
FuelIdentifier : EL

DriveSourceDetails

DriveSourceIdentifier : C
FuelIdentifier : G

FuelCellIndicator : N
RechargeableEnergyStorageSystemIndicator : Y
RechargeableEnergyStorageDeviceIdentifier : B
OffBoardChargeCapabilityIndicator : N
TestDriveCode : F
ShiftIndicatorLightUsageIdentifier : 1
AgedComponentUsageIdentifier : 4

OdometerCorrectionDetails

CorrectionInitialValue : 10
CorrectionFactorValue : 1.0165
CorrectionSignIdentifier : -
CorrectionUnitsCode : M

EngineCodeText : G4FT-AC
EngineRatedHorsepowerValue : 178
EngineDisplacementValue : 1.6

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AirAspirationDetails

AirAspirationMethodIdentifier : TC
AirAspirationDeviceCount : 1
AirAspirationConfigurationIdentifier : N

ChargeAirCoolerIdentifier : A

VehicleSpecificationsDetails

CurbWeightValue : 4532
EquivalentTestWeightValue : 4750
GrossVehicleWeightRatingValue : 5799
NVRatioValue : 32.3
AxleRatioValue : 3.51

TransmissionSpecificationsDetails

LightDutyTransmissionTypeIdentifier : AMS
TransmissionLockupIndicator : N
TransmissionCreeperGearIndicator : N
TransmissionGearCount : 6

TargetSetCoefficientDetails

TestProcedureDynamometerCoefficientsCategory : C-H-E
TargetCoefficientAValue : 39.616
TargetCoefficientBValue : 0.19265
TargetCoefficientCValue : 0.025583
SetCoefficientAValue : 15.719
SetCoefficientBValue : 0.14134
SetCoefficientCValue : 0.024753

TargetSetCoefficientDetails

TestProcedureDynamometerCoefficientsCategory : Cold-CO
TargetCoefficientAValue : 43.578
TargetCoefficientBValue : 0.21191
TargetCoefficientCValue : 0.028141
SetCoefficientAValue : 14.328
SetCoefficientBValue : 0.09642
SetCoefficientCValue : 0.027517

TargetSetCoefficientDetails

TestProcedureDynamometerCoefficientsCategory : US06
TargetCoefficientAValue : 39.616
TargetCoefficientBValue : 0.19265
TargetCoefficientCValue : 0.025583
SetCoefficientAValue : 15.719
SetCoefficientBValue : 0.14134
SetCoefficientCValue : 0.024753

ManufacturerCommentText : DDV Vehicle ID. Transmission type is corrected to AMS.

EPAGeneratedTestVehicleDetails

OriginalReceiptDate : 20231211
HybridVehicleIndicator : Y
AdjustedLoadedVehicleWeightValue : 5165
LoadedVehicleWeightValue : 4832
TotalRoadLoadHorsepowerValue : 15.1

TransactionStatusDetails

TransactionStatusIdentifier : ACCEPTED

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Exhaust & Evaporative Emission Data Vehicle

Please refer to CSI report in 07.00.

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07.00 Test Results
07.01 EV-CIS Certification Summary Information

Certification Summary Information Report submitted to EV-CIS.

See 18.00.00.

07.02 Litmus Test Sheet

Litmus Test of EDV

EDV	FTP(75°F)	Cold FTP (20°F)	HFET	US06	SC03
BAG1	24.8	19.1	39.4	21.8	25.2
BAG2	49.4	38.0		31.4	
BAG3	30.2	24.1			
BAG4	49.9				
TOTAL	35.8			28.6	

(1) Determining the City FE Method

5 Cycle City Criteria (Specific 5 cycle City FE $\geq$ 0.96 Mpg Based City FE)	Passed
---	--------

		UNROUNDED	ADJ. ROUNDED	Examination	Decision
CITY FE	MPG BASED	27.4002	26.3	Applicable	
	5-CYCLE	27.1504	27.2	Applicable	Selected
	Ratio of 5CYCLE to 0.96 MPG-BASED		103.42		

CRITERIA : 100%

(2) Determining the Hwy FE Method

5 Cycle Highway Criteria (Specific 5 cycle HWY FE $\geq$ 0.95 Mpg Based HWY FE)	Passed
--	--------

		UNROUNDED	ADJ. ROUNDED	Examination	Decision
HWY FE	MPG BASED	27.7421	26.4	Not Applicable	
	5-CYCLE	28.7748	28.8	Select This	Selected
	MODIFIED	28.8136	28.8	Not Applicable	
	Ratio of 5CYCLE to 0.95 MPG-BASED		109.09		

CRITERIA : 100%

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08.00 Emission Compliance Statement

Please refer to Common Section 08.00.

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09.00 OBD System Description

The on-board diagnostic (OBD) system complies with 40 CFR 86.1806-05, 86.1806-17 per the compliance option allowing demonstration of compliance with California OBD II requirements in Title 13 California Code of Regulation 1968.2 (13 CCR 1968.2) approved on July 31, 2013.

Please refer to OBD application uploaded in EV-CIS system.

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10.00 Description of Alternate-Fueled Vehicles: Not Applicable

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12.00 Description of Vehicles Covered by Certificate and Test Parameters
12.01 Vehicle Parameters

Carline		730			731	
Model Name		Sportage Hybrid AWD			Sportage Hybrid FWD	
Vehicle Classification		AWD-LDT2, FWD-LDV				
Emission control System description	Type, number and configuration of catalyst(s)	See Sec. 02.02				
	EGR Type	Electronic				
	Air pump type	N/A				
	Fuel system type	DFI				
	Intake air aspiration method	Turbocharger, Charge Air Cooler				
	Other	-				
Engine Code		G4FT-AC				
Number of valves per cylinder		4				
Engine Displacement (L)		1.6				
Sales area		50-State				
Transmission and overdrive		AMS6 (Overdrive)				
SIL		N/A				
Tire		235/55R19 (Michelin* ¹ , Hankook)	235/60R18 (Goodyear)	235/65R17* ² (Hankook, Nexen)	235/60R18 (Goodyear)	235/65R17 (Hankook* ¹ ,Nexen)
N/V Ratios		30.3	30.6	30.6	30.6	30.6
ETW(lb)		4250	4250	4000	4000	3875
Elec. Dyno. Target Coefficient		Please refer to 12.02.01.				
Fuel tank volume(gal)		13.7				

(Note) *¹ : Tested Tire
*² : Canada only

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12.02.02 Engine Starting Procedures

Please refer to Common Section 12.02.02.

12.02.03 Shift Schedules

Please refer to Common Section 12.02.03.01

12.02.04 Transmission / Advanced Technology System Test Modes

Please refer to Common Section 12.02.04.

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13.00 Projected Sales

Please refer to Common Section 13.00.

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Issued : 01-28-2026
Revised:

14.00 Request for Certification



Ms. Kathryn Kochunas
Certification Division
Mobile Source Pollution Control
U.S. Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, Michigan

Subject: Request for Certificate of Conformity for 2027 Model Year Test Group
VKMXJ01.6P13 / Evaporative Family VKMXR0135P1G

Dear Ms. Kathryn Kochunas:

Kia Corporation requests that EPA issue a Certificate of Conformity for the test group subjected above.

All vehicles within the test group mentioned above comply with the applicable regulations contained in 40 CFR86.188-01(d), (14) including the provisions of 40 CFR Parts 85, 86 and 600. This test group also complies with California Air Resources Board, Final Regulation Order, Sections 1961.4 and 1961.3 (1962.4 and 1962.3 for zero-emission vehicles) Title 13, California Code of Regulations.

The Part 1 Application for Certification has been prepared in accordance with the standardized format recommended by EPA via its guidance document CD-14-19 (LDV/LDT/OCO/LIMO) Subject: Certification Application Reporting Guidance, dated November 24, 2014.

If you have any questions regarding the Certificate of Conformity, do not hesitate to contact Stephanie Wright at swright@hatci.com or (734) 273-1904.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. H. Ji'.

C. H. Ji
General Manager
Regulation & Certification Team 2
Kia Corporation

VKMXJ01.6P13 – Kia Sportage Hybrid 1.6L T-GDI – Part 1
Issued : 01-28-2026
Revised:



Ms. Robin U. Lang, Chief
Emissions Compliance, Automotive Regulation & Science Div.
California Air Resources Board
4001 Iowa Ave.
Riverside, California 92507

Subject: Request for an Executive Order for 2027 Model Year Test Group
VKMXJ01.6P13 / Evaporative Family VKMXR0135P1G

Dear Ms. Robin U. Lang:

Kia Corporation requests that California Air Resources Board (CARB) issue an Executive Order for the test group subjected above.

All vehicles within the test group mentioned above comply with the applicable regulations contained in 40 CFR86.188-01(d), (14) including the provisions of 40 CFR Parts 85, 86 and 600. This test group also complies with California Air Resources Board, Final Regulation Order, Sections 1961.4 and 1961.3 (1962.4 and 1962.3 for zero-emission vehicles) Title 13, California Code of Regulations.

The Part 1 Application for Certification has been prepared in accordance with the standardized format recommended by EPA via its guidance document CD-14-19 (LDV/LDT/OCO/LIMO) Subject: Certification Application Reporting Guidance, dated November 24, 2014.

If you have any questions regarding the Executive Order, do not hesitate to contact Stephanie Wright at swright@hatci.com or (734) 273-1904.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ji' followed by a stylized surname, written over a horizontal line.

C. H. Ji
General Manager
Regulation & Certification Team 2
Kia Corporation

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15.00 Other Information
15.01 Certification Fee Filing Form

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15.02 Vehicle Emission Control Information (VECI) Label

	KIA CORPORATION VEHICLE EMISSION CONTROL INFORMATION		
Conforms to regulations :		2027 MY	
U.S.EPA : Interim T4B30 LDV/LDT		OBD : CA II	Fuel : Gasoline
California : LEV IV SULEV30 LDT		OBD : CA II	Fuel : Gasoline
No adjustments needed.		DFI, WR-HO2S, HO2S, WU-TWC, TWC, TC, CAC, EGR, EGRC	
Group : VKMXJ01.6P13 Evap. : VKMXR0135P1G		ALC	32459-2MNQ4 

15.03 ORVR Safety Statement

Kia Corporation uses standard technology in all ORVR systems for 2027 model year vehicles. In accordance with EPA Guidance Letter C1SD-06-06, ORVR applications will not be submitted.

15.04 New Technology System Description

Please refer to Common Section 15.04.

15.05 Engine Oil Information

Please refer to Common Section 15.05

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16.00 California ARB Information**16.01 Exhaust Emission Control System (Tune-up label)**

Test Group Name	Model	Exhaust Emission Control System
VKMXJ01.6P13	Sportage Hybrid AWD Sportage Hybrid FWD	DFI, WR-HO2S, HO2S, WU-TWC TWC, TC, CAC, EGR, EGRC, OBD-II

Note:

DFI	: Direct Fuel Injection
WR-HO2S	: Wide Range/Linear/Air-Fuel Ratio Heated Oxygen Sensor
HO2S	: Heated Oxygen Sensor
WU-TWC	: Warm up Three Way Catalyst System
TWC	: Three Way Catalyst System
TC	: Turbocharger
CAC	: Charge Air Cooler
EGR	: Exhaust Gas Recirculation
EGRC	: EGR Cooler

(use abbreviations per SAE J1930 Oct 08)

16.02 Test Procedures

Please refer to Common Section 16.02.

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16.03.00 Fill Pipe Access Zones Statement and Specifications

16.03.01 Fill Pipe Access Zones Statement

Please refer to Common Section 16.03.01

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16.04.00 Request for Certificate

Please refer to 14.00.

16.04.01 Statement of Compliance

Please refer to Common Section 16.04.01.

16.04.02 Supplemental Data Sheet

Please refer to E-cert data.

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16.05.00 Emission Testing Waiver Statement

Please refer to Common Section 16.05.00.

16.06.00 Projected Sales

Please refer to Common Section 13.00.

16.07.00 OBD-II System Description

Please refer to section 09.00.

16.08.00 New Technology System Description

Please refer to Common Section 15.04.

16.09.00 Environmental Performance Label

Pursuant to CALIFORNIA ENVIRONMENTAL PERFORMANCE LABEL SPECIFICATIONS FOR 2009 AND SUBSEQUENT MODEL YEAR PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY PASSENGER VEHICLES (adopted May 2, 2008, last amended September 2, 2015), 2012, Hyundai Kia complies Environmental Performance Label requirement by affixing the Federal Fuel Economy and Environment Label in accordance to 40 CFR Parts 85, 86, and 600 as promulgated on July 6, 2011.

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16.10.00 AECD General Statements

The vehicles contained in this test group are not equipped with a defeat device and are not equipped with alternative mapping strategies. Furthermore, all AECDs have been declared and described in the application.

As described in our application, the vehicle's transmission is not part of any AECD. However, the transmission gear is an input for the emissions control strategy, as described in that application. The ECU does not provide an output to the TCU to control emissions strategy.

When driving conditions on the road can be properly represented on the dynamometer, the transmission will perform in the same manner. However, there are some different driving conditions, such as an uphill or downhill grade, extreme heat or extreme cold conditions, heavy braking, and curved road driving conditions, which cannot be appropriately represented on the dynamometer. In these conditions where necessary to protect the transmission or to prevent an unnatural shift pattern, a different shift pattern may be executed. It is our understanding that this is commonly used throughout the industry.

The Hyundai-Kia American Technical Center and the Hyundai Motor Group Research and Development Center in Namyang, Korea have endeavored to respond based on our understanding of the regulatory definition of an AECD, the past certification reviews of AECDs conducted by ARB, existing guidance regarding AECDs issued by ARB, and, of course, EPA's and ARB's increased interest in this area. We will continue to monitor guidance issued by ARB regarding the level of information and detail desired in a certification application, and will continue to evaluate AECD issues to ensure transparency with respect to our vehicle and engine performance.

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16.11.00 California warranty compliance

Please refer to Common Section 16.11.00.

16.12.00 Description of the Propulsion System: Not Applicable

16.13.00 ZEV Compliance: Not Applicable

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17.00.00 Service of Process

Please refer to Common Section 01.00.

18.00.00 Attachment

1. CSI Report

VKMXJ01.6P13 – Kia Sportage Hybrid 1.6L T-GDI – Part 1
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Revised:

Certification Summary Information Report

Manufacturer	Kia Corporation	Manufacturer Code	KMX
Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Certificate Number	--	CARB Executive Order #	--
Certificate Issue Date	--	Certificate Revision Date	--
Certificate Effective Date	--	Conditional Certificate	--
CSI Revision #	--	CSI Submission/Revision Date	01/18/2026 09:39:04 PM
Model Year	2027		

Certification Summary Information Report

Test Group	VKMXXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
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Test Group Information

CSI Type	New	Running Change Reference Number	--
GHG Exempt Status	Not Exempt		

Drive Sources and Fuel(s)

Drive Source #1: Electric Motor

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Electricity	--	--

Drive Source #2: Combustion Engine

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Gasoline	Spark Ignition Direct fuel injection	No

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	No
Fuel Cell Indicator	No	EPA Vehicle Class	LDT2, LDV
Federal Clean Fuel Vehicle	No	Federal Clean Fuel Vehicle Standard	--
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emissions Vehicle Indicator	No
Durability Group Name	VKMXXHHGNNP13	Durability Group Equivalency Factor	1.0
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	--	CAP2000 Conditional Certificate?	N/A
Independent Commercial Importer?	--	Alternative Fuel Converter Certificate?	--
SFTP Federal Composite Compliance Identifier	Tier 3	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	No		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	VKMXXJ01.6P13
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD Deficiencies	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	The fuel for Litmus test is E10. Litmus result(Value/Threshold) City(27.2/26.3) HWY(28.8/26.4). Test No:TKMX10088389(FTP),TKMX10088391(US06),TKMX10088392(SC03),TKMX10088393(Cold CO),TKMX10088390(HWFE)		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	01/18/2026 09:28:22 PM				
Integrated ORVR?	Yes	Fuel(s)	Gasoline				
Multiple Fuel Storage	--						
Bladder Fuel Tank?	No						
Fuel Tank Material	Plastic	Fuel Tank Material Description	HDPE				
Fill Pipe Seal Type	Liquid seal						
Air Intake System Vapor Storage Device?	Yes	Air Intake System Vapor Storage Device Description	HC-TRAP				
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	--				
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	135	Number of Primary Canisters	1				
Number of Bleed Canisters	0	Bleed Canister Total Working Capacity (grams)	--				
Mfr Evaporative/Refueling Family Comments	--						
Leak Family Details							
Leak Family Indicator	Yes						
Canister Bleed Test Indicator	Yes	Applicability of Evaporative Canister Bleed Test	50 State				
Evaporative Canister Bleed Test Comments	--						
CARB Fuel Only (Rig) Test Indicator	No	Applicability of CARB Fuel Only (Rig) Test	--				
CARB Fuel Only (Rig) Test Comments	--						
Leak Family Name	Applicability of Leak Family Requirements	Leak Family Standard (inches)	Leak Family Description				
VKMXR0135P1G-NQH	50 State	0.02	--				
Models Covered by this Certificate							
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Kia Corporation	1 - KIA	730 - Sportage Hybrid AWD	Federal	All Wheel Drive	Automated Manual-Selectable (e.g. Automated Manual with paddles)	6	No
Kia Corporation	1 - KIA	731 - Sportage Hybrid FWD	Federal	2-Wheel Drive, Front	Automated Manual-Selectable (e.g. Automated Manual with paddles)	6	No
Kia Corporation	1 - KIA	731 - Sportage Hybrid FWD	California + CAA Section 177 states	2-Wheel Drive, Front	Automated Manual-Selectable (e.g. Automated Manual with paddles)	6	No
Kia Corporation	1 - KIA	730 - Sportage Hybrid AWD	California + CAA Section 177 states	All Wheel Drive	Automated Manual-Selectable (e.g. Automated Manual with paddles)	6	No

Certification Summary Information Report

Test Group	VKMXXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G	
Engine Description				
Hybrid Type	IC Engine/Electric Motor	Hybrid Description	--	
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--	
Engine Block Arrangement	Inline	Mfr Engine Block Arrangement Description	--	
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	SAE 0W-20 API SN PLUS	
Number of Cylinders/Rotors	4	Mechanically Variable Compression Ratio Indicator	N	
After Treatment Device(s) (ATD)				
ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Platinum + Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Platinum + Rhodium	Ceramic	Monolith
Mfr After Treatment Device (ATD) Comments				
--				
Direct Ozone Reduction (DOR) Device				
Not Equipped				
Mfr Emission Control Device Comments				
--				
Engine Configuration Number 1				
Engine Displacement (liters)	1.6	Engine Rated Horsepower	178	
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2	
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	1	
Air Aspiration Device Configuration	Single	Charge Air Cooler Type	Air	
Air Aspiration Drive Method(s)	Mechanical			
Cylinder Deactivation	No			
Cylinder Deactivation Description	--			
Variable Valve Timing	Yes			
Variable Valve Timing System Description	Fixed 3			
Variable Valve Lift?	No			
Variable Valve Lift System Description	--			
Number of Knock Sensors	1	Number of Air/Fuel Sensors	2	
Air/Fuel Sensor # 1 Type	Other	Air/Fuel Sensor # 1 Description	WR-HO2S	
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--	
Mfr Air/Fuel Sensor Comments	--			
Exhaust Gas Recirculation	Yes	Cooled Exhaust Gas Recirculation	Yes	
EGR Type	Electronic/Electric	Exhaust Gas Recirculation Description if 'Other'	--	
Closed Loop Air Injection System	No			
Air Injection Type	--	Air Injection Type if 'Other'	--	
Mfr Engine Configuration Comments	--			

Certification Summary Information Report

Test Group		VKMXJ01.6P13		Evaporative/Refueling Family		VKMXR0135P1G				
Official Test Numbers										
Test Group Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Electricity	--	--	--	--	--	--	--	--	--	--
Gasoline	TKMX10088389	TKMX10088391	TKMX10088392	TKMX10088393	TKMX10088390	32.8	228.2	37.5	286.1	--
SFTP LEV-III Official Test Numbers										
Test Group Fuel	FTP		US06		SC03					
Gasoline	TKMX10088389		TKMX10088391		TKMX10088392					
Electricity	--		--		--					
Official Charge Depleting Test Numbers										
Test Group Fuel	UDDS		Highway							
Electricity	--		--							
Hybrid Electric Vehicle And Fuel Cell Information										
Rechargeable Energy Storage System	Battery(s)		Rechargeable Energy Storage System, if Other		--					
Battery Type	Lithium Ion		Number of Battery Packs		1					
Total Voltage of Battery Packs	270		Battery Energy Capacity		5.5					
Battery Specific Energy	37.5		Battery Charger Type		On-Board					
Number of Capacitors	--		Capacitor Rating (In Farads)		--					
Mfr Capacitor Comments	--									
Hydraulic System Description	--									
Regenerative Braking Type	Electrical Regen Brake		Driver Controlled Regenerative Braking		Yes					
Regenerative Braking Source	Front Wheels									
Mfr Regenerative Braking Description	--									
Drive Motor(s)/Generator(s)	1		Rated Motor/Generator Power		48					
Motor/Generator Type 1	PMSM									
Mfr Fuel Cell Description	--									
Fuel Cell On-Board H2 Storage Capacity (kg)	--		Usable H2 Fill Capacity (kg)		--					
Mfr Hybrid Electric/ Electric Vehicle Comments	--									

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G									
Emission Data Vehicle Information												
Vehicle ID / Configuration	MQ4U1G6HA581F / 0	Manufacturer Vehicle Configuration Number	0									
Original Test Group Name	MKMXV01.6J13	Original Evaporative/Refueling Family	MKMXR0137J1G									
Original Test Vehicle Model Year	2021											
Vehicle Model												
Represented Test Vehicle Make	KIA	Represented Test Vehicle Model	SORENTO HYBRID									
Leak Family Details												
Leak Family Identifier	MQH	Leak Family Name	MKMXR0137J1G-MQH									
Drive Sources and Fuel System Details												
<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th><th>Drive Source</th><th>Fuel</th></tr> </thead> <tbody> <tr> <td>1</td><td>Electric Motor</td><td>Electricity</td></tr> <tr> <td>2</td><td>Combustion Engine</td><td>Gasoline</td></tr> </tbody> </table>				Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity	2	Combustion Engine	Gasoline
Drive Source and Fuel#	Drive Source	Fuel										
1	Electric Motor	Electricity										
2	Combustion Engine	Gasoline										
Hybrid Indicator	Yes											
Multiple Fuel Storage	--	Multiple Fuel Combustion	--									
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	Yes									
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--									
Off-board charge Capable Indicator	No											
Odometer Correction -- Initial	0	Odometer Correction Factor	0.9976									
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor											
Odometer Correction Units	Miles											
Engine Code	G4FT-AC	Rated Horsepower	177									
Displacement (liters)	1.6											
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'										
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single									
Charge Air Cooler Type	Air	Drive Mode While Testing	2-Wheel Drive, Front									
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)									
Curb Weight (lbs)	4065	Equivalent Test Weight (pounds)	4250									
GVWR (lbs)	5578	N/V Ratio	32.3									
Axle Ratio	3.51											
Transmission Type	Automated Manual- Selectable (e.g. Automated Manual with paddles)	# of Transmission Gears	6									
Transmission Lockup	No	Creep Gear	No									

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
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Dynamometer Coefficients:

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	33.96	0.01277	0.027097	12.811	0.05451	0.025975	13.6

Emission Control Device Comments --

Manufacturer Test Vehicle Comments SORENTO HYBRID 21MY 17" EVAP-correct TM type(SA to AMS)

Test #	MKMX10064838	Test Procedure	38 - CA fuel 3-day evap.
Exhaust Test # for this Evap Test	MKMX10064829	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	04/29/2020	Fuel	Gasoline
Fuel Batch ID	19E-03	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	2250	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.2141	--

Manufacturer Test Comments 3DBL

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.2141	0	0.214	0.4	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2141	0	0.214	0.4	Pass

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Test #	MKMX10064840	Test Procedure	27 - California fuel 2-day evap
Exhaust Test # for this Evap Test	MKMX10064831	Test Fuel Type	46 - CARB LEV3 E10 Regular
Test Date	04/14/2020	Fuel	Gasoline
Fuel Batch ID	19E-03	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	2185	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.2418	--

Manufacturer Test Comments 2DBL

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.2418	0	0.242	0.4	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2418	0	0.242	0.4	Pass

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G						
Test #	MKMX10064839	Test Procedure	37 - California Fuel Running Loss						
Exhaust Test # for this Evap Test	MKMX10064829	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline						
Test Date	04/29/2020	Fuel	Gasoline						
Fuel Batch ID	19E-03	Fuel Calibration Number	1						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	772-1, Jangduck-Dong								
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)								
Test Start Odometer Reading	2250	Odometer Units	M						
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--						
State of Charge Delta	Yes								
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	No						
Test Results									
<table border="1"> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.0002</td> <td>--</td> </tr> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0002	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0002	--							
Manufacturer Test Comments RL									
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0	0	0	0.05	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0	0	0	0.01	Pass	

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G						
Test #	MKMX10064841	Test Procedure	24 - Federal fuel refueling test (ORVR)						
Exhaust Test # for this Evap Test	MKMX10064824	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)						
Test Date	03/19/2020	Fuel	Gasoline						
Fuel Batch ID	19T-02	Fuel Calibration Number	1						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	772-1, Jangduck-Dong								
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)								
Test Start Odometer Reading	2114	Odometer Units	M						
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--						
State of Charge Delta	--								
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No						
Test Results									
<table border="1"> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.0304</td> <td>--</td> </tr> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0304	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0304	--							
Manufacturer Test Comments ORVR									
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.03	0	0.03	0.2	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.03	0	0.03	0.2	Pass	

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Test #	MKMX10064842	Test Procedure	65 - Evap Canister Bleed Test
Exhaust Test # for this Evap Test	--	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	03/24/2020	Fuel	Gasoline
Fuel Batch ID	19E-03	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	2141	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL (Total Hydrocarbon)	0.0077	--

Manufacturer Test Comments

BLEED-CORRECT E10 MEASUREMENT METHOD

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL	0.0077	0	0.008	0.02	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL	0.0077	0	0.008	0.02	Pass

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G						
Test #	MKMX10064832	Test Procedure	67 - Leak Test - Port Near Canister						
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)						
Test Date	03/13/2020	Fuel	Gasoline						
Fuel Batch ID	19T-02	Fuel Calibration Number	1						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	772-1, Jangduck-Dong								
E10 Evaporative Test Measurement Method	--								
Test Start Odometer Reading	2045	Odometer Units	M						
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--						
State of Charge Delta	--								
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No						
Test Results									
	<table><tr><td>Test Result Name</td><td>Unrounded Test Result</td><td>Verify Calculated FE Equivalent Value</td></tr><tr><td>LEAK-DIA (Effective Leak Diameter (inches))</td><td>0</td><td>--</td></tr></table>			Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value	LEAK-DIA (Effective Leak Diameter (inches))	0	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value							
LEAK-DIA (Effective Leak Diameter (inches))	0	--							
Manufacturer Test Comments	Leak Test Port Near Canister								
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	
Fed	150,000 miles	Federal Tier 3 Evap	LEAK-DIA	0	0	0	0.02	Pass	
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	LEAK-DIA	0	0	0	0.02	Pass	

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Test #	MKMX10064837	Test Procedure	68 - Leak Test - Port Near Fuel Pipe
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/13/2020	Fuel	Gasoline
Fuel Batch ID	19T-02	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	2045	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
LEAK-DIA (Effective Leak Diameter (inches))	0	--

Manufacturer Test Comments

Leak Test Port Near Fuel Pipe

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	LEAK-DIA	0	0	0	0.02	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	LEAK-DIA	0	0	0	0.02	Pass

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G									
Emission Data Vehicle Information												
Vehicle ID / Configuration	NQ5-KU6G6HA302A / 0	Manufacturer Vehicle Configuration Number	0									
Original Test Group Name	TKMXT01.6P13	Original Evaporative/Refueling Family	TKMXR0135P1G									
Original Test Vehicle Model Year	2026											
Vehicle Model												
Represented Test Vehicle Make	KIA	Represented Test Vehicle Model	SPORTAGE HYBRID									
Leak Family Details												
Leak Family Identifier	NQH	Leak Family Name	TKMXR0135P1G-NQH									
Drive Sources and Fuel System Details												
	<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th><th>Drive Source</th><th>Fuel</th></tr> </thead> <tbody> <tr> <td>1</td><td>Electric Motor</td><td>Electricity</td></tr> <tr> <td>2</td><td>Combustion Engine</td><td>Gasoline</td></tr> </tbody> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity	2	Combustion Engine	Gasoline		
Drive Source and Fuel#	Drive Source	Fuel										
1	Electric Motor	Electricity										
2	Combustion Engine	Gasoline										
Hybrid Indicator	Yes											
Multiple Fuel Storage	--	Multiple Fuel Combustion	--									
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	Yes									
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--									
Off-board charge Capable Indicator	No											
Odometer Correction -- Initial	25	Odometer Correction Factor	0.9992									
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles											
Odometer Correction Units	Miles											
Engine Code	G4FT-AC	Rated Horsepower	178									
Displacement (liters)	1.6											
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'										
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single									
Charge Air Cooler Type	Air	Drive Mode While Testing	2-Wheel Drive, Front									
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)									
Curb Weight (lbs)	3969	Equivalent Test Weight (pounds)	4250									
GVWR (lbs)	5093	N/V Ratio	30.3									
Axle Ratio	3.32											
Transmission Type	Automated Manual- Selectable (e.g. Automated Manual with paddles)	# of Transmission Gears	6									
Transmission Lockup	No	Creep Gear	No									

Certification Summary Information Report

Test Group		VKMXJ01.6P13			Evaporative/Refueling Family		VKMXR0135P1G	
Dynamometer Coefficients:								
Target Coefficients				Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients	
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		
City/Highway/Evap	31.251	0.3954	0.022072	8.105	0.43952	0.02058	14.2	
Cold CO	34.376	0.43494	0.024279	6.483	0.30141	0.023756	N/A	
US06	31.251	0.3954	0.022072	8.105	0.43952	0.02058	N/A	
Emission Control Device Comments		--						
Manufacturer Test Vehicle Comments		26MY NQ5 HEV PE 1.6T 6AT AWD ETW 4250 (EDV)						

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Test #	TKMX10088389	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/30/2024	Fuel	Gasoline
Fuel Batch ID	24T-01	Fuel Calibration Number	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4244	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	348.4086	--
FE BAG 1 (Bag 1 Fuel Economy)	24.8019	24.8019
CO2 BAG 2 (Bag 2 Carbon Dioxide)	175.1758	--
FE BAG 2 (Bag 2 Fuel Economy)	49.3752	49.3752
CO2 BAG 3 (Bag 3 Carbon Dioxide)	285.8853	--
FE BAG 3 (Bag 3 Fuel Economy)	30.1997	30.1997
CO2 BAG 4 (Bag 4 Carbon Dioxide)	172.5897	--
FE BAG 4 (Bag 4 Fuel Economy)	49.9414	49.9414
METHANE (CH4 - Methane)	0.0038	--
CO (Carbon Monoxide)	0.0691	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.09	--
DT-EER (Drive Trace Energy Economy Rating)	-1.24	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.52	--
MFR FE (Manufacturer Fuel Economy)	35.8357	35.8357
NOX (Nitrogen Oxide)	0.0034	--
N2O (Nitrous Oxide)	0.0005	--
HC-NM (Non-methane Hydrocarbon)	0.0039	--
NMOG (Non-methane organic gases)	0.0043	--
PM (Particulate Matter)	0.0001	--
HC-TOTAL (Total Hydrocarbon)	0.00748	--

Certification Summary Information Report

Test Group		VKMXJ01.6P13			Evaporative/Refueling Family				VKMXR0135P1G			
		Test Result Name		Unrounded Test Result			Verify Calculated CREE/OPT-CREE					
		Carbon-Related Exhaust Emissions		241.1311			999					
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		240.6519			--					
Manufacturer Test Comments		26MY NQ5 HEV PE 1.6T AWD 6AT 19" E10-FTP										
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	999	--	--	--	0.229467	--	999	--	--
Fed	120,000 miles	Federal Tier 3 Bin 30	METHANE	0.0038	--	--	--	0.0014	--	0.005	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	N2O	0.0005	--	--	--	0.001	--	0.002	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.07	--	--	--	0.22	--	0.3	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO-COMP	0.3	--	--	--	0	--	0.3	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0043	--	1.1	--	0.0036	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0077	--	--	--	--	--	0.013	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX-COMP	0.0118	--	--	--	0	--	0.012	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0034	--	--	--	0.0016	--	0.005	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0001	--	--	--	0	--	0	0.003	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.07	--	--	--	0.22	--	0.3	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0043	--	1.1	--	0.0036	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0077	--	--	--	--	--	0.013	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0034	--	--	--	0.0016	--	0.005	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0001	--	--	--	0	--	0	0.001	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G																																																			
Test #	TKMX10088393	Test Procedure	11 - Cold CO																																																			
Exhaust Test # for this Evap Test	--	Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)																																																			
Test Date	11/08/2024	Fuel	Gasoline																																																			
Fuel Batch ID	22D-01	Fuel Calibration Number	1																																																			
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined																																																			
Verify Test Lab ID	772-1, Jangduck-Dong																																																					
E10 Evaporative Test Measurement Method	--																																																					
Test Start Odometer Reading	4485	Odometer Units	M																																																			
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--																																																			
State of Charge Delta	Yes																																																					
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes																																																			
Test Results																																																						
<table border="1"> <thead> <tr> <th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated FE Equivalent Value (miles per gallon)</th></tr> </thead> <tbody> <tr> <td>CO2 BAG 1 (Bag 1 Carbon Dioxide)</td><td>452.3383</td><td>--</td></tr> <tr> <td>FE BAG 1 (Bag 1 Fuel Economy)</td><td>19.0968</td><td>19.0968</td></tr> <tr> <td>CO2 BAG 2 (Bag 2 Carbon Dioxide)</td><td>227.8309</td><td>--</td></tr> <tr> <td>FE BAG 2 (Bag 2 Fuel Economy)</td><td>37.9635</td><td>37.9635</td></tr> <tr> <td>CO2 BAG 3 (Bag 3 Carbon Dioxide)</td><td>359.1601</td><td>--</td></tr> <tr> <td>FE BAG 3 (Bag 3 Fuel Economy)</td><td>24.1007</td><td>24.1007</td></tr> <tr> <td>METHANE (CH4 - Methane)</td><td>0.0019</td><td>--</td></tr> <tr> <td>CO (Carbon Monoxide)</td><td>0.1519</td><td>--</td></tr> <tr> <td>DT-ASCR (Drive Trace Absolute Speed Change Rating)</td><td>0.38</td><td>--</td></tr> <tr> <td>DT-EER (Drive Trace Energy Economy Rating)</td><td>-0.69</td><td>--</td></tr> <tr> <td>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</td><td>-0.13</td><td>--</td></tr> <tr> <td>MFR FE (Manufacturer Fuel Economy)</td><td>27.895</td><td>27.895</td></tr> <tr> <td>NOX (Nitrogen Oxide)</td><td>0.0051</td><td>--</td></tr> <tr> <td>HC-NM (Non-methane Hydrocarbon)</td><td>0.0264</td><td>--</td></tr> <tr> <td>NMOG (Non-methane organic gases)</td><td>0.0291</td><td>--</td></tr> <tr> <td>HC-TOTAL (Total Hydrocarbon)</td><td>0.02807</td><td>--</td></tr> </tbody> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	CO2 BAG 1 (Bag 1 Carbon Dioxide)	452.3383	--	FE BAG 1 (Bag 1 Fuel Economy)	19.0968	19.0968	CO2 BAG 2 (Bag 2 Carbon Dioxide)	227.8309	--	FE BAG 2 (Bag 2 Fuel Economy)	37.9635	37.9635	CO2 BAG 3 (Bag 3 Carbon Dioxide)	359.1601	--	FE BAG 3 (Bag 3 Fuel Economy)	24.1007	24.1007	METHANE (CH4 - Methane)	0.0019	--	CO (Carbon Monoxide)	0.1519	--	DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.38	--	DT-EER (Drive Trace Energy Economy Rating)	-0.69	--	DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.13	--	MFR FE (Manufacturer Fuel Economy)	27.895	27.895	NOX (Nitrogen Oxide)	0.0051	--	HC-NM (Non-methane Hydrocarbon)	0.0264	--	NMOG (Non-methane organic gases)	0.0291	--	HC-TOTAL (Total Hydrocarbon)	0.02807	--
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Manufacturer Test Comments	26MY NQ5 HEV PE 1.6T AWD 6AT 19" E10-Cold FTP(20F)																																																					

Certification Summary Information Report

Test Group		VKMXJ01.6P13				Evaporative/Refueling Family				VKMXR0135P1G		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	50,000 miles	Federal Tier 3 Bin 30	CO	0.15	--	--	--	0.07	--	0.2	12.5	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	HC-NM	0.03	--	--	--	0.0025	--	0	0.3	Pass
CA	50,000 miles	California LEV-IV SULEV30	CO	0.15	--	--	--	0.07	--	0.2	12.5	Pass

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G																																	
Test #	TKMX10088394	Test Procedure	52 - Fed. fuel 50 F exh.																																	
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)																																	
Test Date	10/24/2024	Fuel	Gasoline																																	
Fuel Batch ID	24T-01	Fuel Calibration Number	1																																	
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined																																	
Verify Test Lab ID	772-1, Jangduck-Dong																																			
E10 Evaporative Test Measurement Method	--																																			
Test Start Odometer Reading	4164	Odometer Units	M																																	
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--																																	
State of Charge Delta	Yes																																			
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes																																	
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Test Result Name	Unrounded Test Result	Verify Calculated CO2																																		
Carbon dioxide	253.0945	--																																		
Manufacturer Test Comments	26MY NQ5 HEV PE 1.6T AWD 6AT 19" E10-50F FTP																																			

Certification Summary Information Report

Test Group		VKMXJ01.6P13				Evaporative/Refueling Family				VKMXR0135P1G		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	4,000 miles	California LEV-IV SULEV30	CO	0.13	--	--	--	--	--	0.1	1.0	Pass
CA	4,000 miles	California LEV-IV SULEV30	NMOG	0.0116	--	1.1	--	--	--	0.012	99.999	Pass
CA	4,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0144	--	--	--	--	--	0.014	0.060	Pass
CA	4,000 miles	California LEV-IV SULEV30	NOX	0.0028	--	--	--	--	--	0.003	99.999	Pass

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Test #	TKMX91006203	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	01/17/2025	Fuel	Gasoline
Fuel Batch ID	29351	Fuel Calibration Number	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4689	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	285.0223083	--
FE BAG 1 (Bag 1 Fuel Economy)	31.2221222	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	108.266983	--
FE BAG 2 (Bag 2 Fuel Economy)	82.316391	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	276.0973206	--
FE BAG 3 (Bag 3 Fuel Economy)	32.274044	--
CO2 BAG 4 (Bag 4 Carbon Dioxide)	124.4626541	--
FE BAG 4 (Bag 4 Fuel Economy)	71.6050262	--
METHANE (CH4 - Methane)	0.0020288	--
CO (Carbon Monoxide)	0.0492578	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.0809734	--
DT-EER (Drive Trace Energy Economy Rating)	-0.7648641	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.4992959	--
MFR FE (Manufacturer Fuel Economy)	45.5593185	--
NOX (Nitrogen Oxide)	0.0006147	--
N2O (Nitrous Oxide)	0.0001637	--
HC-NM (Non-methane Hydrocarbon)	0.0072677	--
NMOG (Non-methane organic gases)	0.0075584	--
PM (Particulate Matter)	0.0005575	--
HC-TOTAL (Total Hydrocarbon)	0.0092505	--

Certification Summary Information Report

Test Group		VKMXJ01.6P13			Evaporative/Refueling Family				VKMXR0135P1G			
		Test Result Name		Unrounded Test Result		Verify Calculated CREE/OPT-CREE						
		Carbon-Related Exhaust Emissions		9999.9999999		196						
		Test Result Name		Unrounded Test Result		Verify Calculated CO2						
		Carbon dioxide		195.517807		--						
Manufacturer Test Comments		None										
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	196	--	--	--	0.229467	--	196	--	--
Fed	120,000 miles	Federal Tier 3 Bin 30	METHANE	0.002	--	--	--	0.0014	--	0.003	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	N2O	0.0002	--	--	--	0.001	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.05	--	--	--	0.22	--	0.3	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0076	--	1.1	--	0.0036	--	0.011	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0082	--	--	--	--	--	0.013	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0006	--	--	--	0.0016	--	0.002	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0006	--	--	--	0	--	0.001	0.003	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.05	--	--	--	0.22	--	0.3	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0076	--	1.1	--	0.0036	--	0.011	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0082	--	--	--	--	--	0.013	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0006	--	--	--	0.0016	--	0.002	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.0006	--	--	--	0	--	0.001	0.001	Pass
NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.												

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Test #	TKMX91006214	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	02/04/2025	Fuel	Gasoline
Fuel Batch ID	29351	Fuel Calibration Number	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4805	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	290.0167236	--
FE BAG 1 (Bag 1 Fuel Economy)	30.6859474	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	95.8452911	--
FE BAG 2 (Bag 2 Fuel Economy)	92.9826279	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	310.7331848	--
FE BAG 3 (Bag 3 Fuel Economy)	28.6725655	--
CO2 BAG 4 (Bag 4 Carbon Dioxide)	101.8979568	--
FE BAG 4 (Bag 4 Fuel Economy)	87.4620972	--
METHANE (CH4 - Methane)	0.0020309	--
CO (Carbon Monoxide)	0.0563426	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.670441	--
DT-EER (Drive Trace Energy Economy Rating)	-1.2172379	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.3192048	--
MFR FE (Manufacturer Fuel Economy)	45.3083992	--
NOX (Nitrogen Oxide)	0.0006404	--
N2O (Nitrous Oxide)	0.0000401	--
HC-NM (Non-methane Hydrocarbon)	0.0076705	--
NMOG (Non-methane organic gases)	0.0079774	--
HC-TOTAL (Total Hydrocarbon)	0.0096554	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	9999.9999999	197

Certification Summary Information Report

Test Group		VKMXJ01.6P13			Evaporative/Refueling Family				VKMXR0135P1G			
				Test Result Name		Unrounded Test Result			Verify Calculated CO2			
				Carbon dioxide		196.5887451			--			
Manufacturer Test Comments				None								
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	197	--	--	--	0.229467	--	197	--	--
Fed	120,000 miles	Federal Tier 3 Bin 30	METHANE	0.002	--	--	--	0.0014	--	0.003	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	N2O	0	--	--	--	0.001	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.06	--	--	--	0.22	--	0.3	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.008	--	1.1	--	0.0036	--	0.012	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0086	--	--	--	--	--	0.014	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0006	--	--	--	0.0016	--	0.002	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.06	--	--	--	0.22	--	0.3	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.008	--	1.1	--	0.0036	--	0.012	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0086	--	--	--	--	--	0.014	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0006	--	--	--	0.0016	--	0.002	99.999	Pass
NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.												

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Test #	TKMX10088390	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/30/2024	Fuel	Gasoline
Fuel Batch ID	24T-01	Fuel Calibration Number	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4274	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0.0262	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.18	--
DT-EER (Drive Trace Energy Economy Rating)	-0.95	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.13	--
MFR FE (Manufacturer Fuel Economy)	39.4486	39.4486
NOX (Nitrogen Oxide)	0.0009	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-TOTAL (Total Hydrocarbon)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	219.0471	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	218.6061	--

Manufacturer Test Comments 26MY NQ5 HEV PE 1.6T AWD 6AT 19" E10-HWY

Certification Summary Information Report

Test Group		VKMXJ01.6P13			Evaporative/Refueling Family					VKMXR0135P1G		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	999	--	--	--	0.229467	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0	--	1.03	--	0.0036	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0009	--	--	--	--	--	0.006	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0009	--	--	--	0.0016	--	0.002	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	--	1.03	--	0.0036	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0009	--	--	--	--	--	0.006	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0009	--	--	--	0.0016	--	0.002	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Test #	TKMX91006206	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	01/17/2025	Fuel	Gasoline
Fuel Batch ID	29351	Fuel Calibration Number	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4704	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
METHANE (CH4 - Methane)	0.000377	--	
CO (Carbon Monoxide)	0.0199357	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.2508746	--	
DT-EER (Drive Trace Energy Economy Rating)	-0.1205302	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.5875807	--	
MFR FE (Manufacturer Fuel Economy)	46.7684555	--	
NOX (Nitrogen Oxide)	0	--	
N2O (Nitrous Oxide)	0	--	
HC-NM (Non-methane Hydrocarbon)	0.0002055	--	
NMOG (Non-methane organic gases)	0.0002137	--	
HC-TOTAL (Total Hydrocarbon)	0.000574	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	9999.9999999	191	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	190.5338135	--	
Manufacturer Test Comments	None		

Certification Summary Information Report

Test Group		VKMXJ01.6P13			Evaporative/Refueling Family					VKMXR0135P1G		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	191	--	--	--	0.229467	--	191	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0002	--	1.03	--	0.0036	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0002	--	--	--	--	--	0.005	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0	--	--	--	0.0016	--	0.002	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0002	--	1.03	--	0.0036	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0002	--	--	--	--	--	0.005	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0	--	--	--	0.0016	--	0.002	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Test #	TKMX91006213	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	01/31/2025	Fuel	Gasoline
Fuel Batch ID	29351	Fuel Calibration Number	1
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4770	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
METHANE (CH4 - Methane)	0	--	
CO (Carbon Monoxide)	0.0405452	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	3.7469707	--	
DT-EER (Drive Trace Energy Economy Rating)	-0.2006449	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	4.4845567	--	
MFR FE (Manufacturer Fuel Economy)	45.6445732	--	
NOX (Nitrogen Oxide)	0	--	
N2O (Nitrous Oxide)	0.000027	--	
HC-NM (Non-methane Hydrocarbon)	0.0006987	--	
NMOG (Non-methane organic gases)	0.0007267	--	
HC-TOTAL (Total Hydrocarbon)	0.0006987	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	9999.9999999	195	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	195.1932678	--	
Manufacturer Test Comments	None		

Certification Summary Information Report

Test Group		VKMXJ01.6P13			Evaporative/Refueling Family					VKMXR0135P1G		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 30	CREE	195	--	--	--	0.229467	--	195	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0007	--	1.03	--	0.0036	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0007	--	--	--	--	--	0.006	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0	--	--	--	0.0016	--	0.002	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0007	--	1.03	--	0.0036	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0007	--	--	--	--	--	0.006	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0	--	--	--	0.0016	--	0.002	99.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G																																																			
Test #	TKMX10088391	Test Procedure	90 - US06																																																			
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)																																																			
Test Date	10/30/2024	Fuel	Gasoline																																																			
Fuel Batch ID	24T-01	Fuel Calibration Number	1																																																			
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined																																																			
Verify Test Lab ID	772-1, Jangduck-Dong																																																					
E10 Evaporative Test Measurement Method	--																																																					
Test Start Odometer Reading	4294	Odometer Units	M																																																			
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--																																																			
State of Charge Delta	Yes																																																					
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes																																																			
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Manufacturer Test Comments	26MY NQ5 HEV PE 1.6T AWD 6AT 19" E10-US06																																																					

Certification Summary Information Report

Test Group		VKMXJ01.6P13			Evaporative/Refueling Family					VKMXR0135P1G		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.085	--	--	--	0.22	--	0.305	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0032	--	1.03	--	0.0036	--	0.007	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0096	--	--	--	--	--	0.015	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0064	--	--	--	0.0016	--	0.008	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.001	--	--	--	0	--	0.001	0.006	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.08	--	--	--	0.22	--	0.3	9.6	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0.0032	--	1.03	--	0.0036	--	0.007	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0096	--	--	--	--	--	0.015	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0064	--	--	--	0.0016	--	0.008	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	PM	0.001	--	--	--	0	--	0.001	0.006	Pass

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G																																	
Test #	TKMX10088392	Test Procedure	95 - SC03																																	
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)																																	
Test Date	10/23/2024	Fuel	Gasoline																																	
Fuel Batch ID	24T-01	Fuel Calibration Number	1																																	
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined																																	
Verify Test Lab ID	772-1, Jangduck-Dong																																			
E10 Evaporative Test Measurement Method	--																																			
Test Start Odometer Reading	4151	Odometer Units	M																																	
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--																																	
State of Charge Delta	Yes																																			
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes																																	
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Certification Summary Information Report

Test Group		VKMXJ01.6P13				Evaporative/Refueling Family				VKMXR0135P1G		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.0819	--	--	--	0.22	--	0.302	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0	--	1.03	--	0.0036	--	0.004	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0034	--	--	--	--	--	0.009	99.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0034	--	--	--	0.0016	--	0.005	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	CO	0.08	--	--	--	0.22	--	0.3	1.0	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG	0	--	1.03	--	0.0036	--	0.004	99.999	Pass
CA	150,000 miles	California LEV-IV SULEV30	NMOG+NOX	0.0034	--	--	--	--	--	0.009	0.030	Pass
CA	150,000 miles	California LEV-IV SULEV30	NOX	0.0034	--	--	--	0.0016	--	0.005	99.999	Pass

Certification Summary Information Report

Test Group	VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Fuel Properties			
Fuel Batch ID	19E-03	Fuel Calibration Number	1
Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline	Fuel Batch Calibration Date	08/08/2019
Fuel Batch Calibration Effective Date	10/29/2019	Fuel Batch Calibration Ineffective Date	10/29/2022
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.75
Fuel Ethanol Volume Percent (%)	9.6	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17917
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.827	Weight Fraction CO2	--
Fuel Batch ID	24T-01	Fuel Calibration Number	1
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	09/29/2022
Fuel Batch Calibration Effective Date	06/25/2024	Fuel Batch Calibration Ineffective Date	06/25/2027
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.74
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17799
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.824	Weight Fraction CO2	--
Fuel Batch ID	22D-01	Fuel Calibration Number	1
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	Fuel Batch Calibration Date	07/29/2021
Fuel Batch Calibration Effective Date	05/10/2022	Fuel Batch Calibration Ineffective Date	05/10/2025
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17925
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.828	Weight Fraction CO2	--
Fuel Batch ID	19T-02	Fuel Calibration Number	1
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	06/05/2019
Fuel Batch Calibration Effective Date	12/10/2019	Fuel Batch Calibration Ineffective Date	12/10/2022
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--

Certification Summary Information Report

Test Group		VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Exhaust Carbon Weight Fraction	--		Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--		Fuel Specific Gravity	0.744
Fuel Ethanol Volume Percent (%)	9.8		Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17949
Fuel Net Heat of Combustion (E10) (MJ/kg)	--		Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.826		Weight Fraction CO2	--
Fuel Batch ID	29351		Fuel Calibration Number	1
Test Fuel Type	61 - Tier 2 Cert Gasoline		Fuel Batch Calibration Date	05/03/2023
Fuel Batch Calibration Effective Date	05/03/2023		Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	--		Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--		Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--		Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)	--		Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18439
Fuel Net Heat of Combustion (E10) (MJ/kg)	--		Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.867		Weight Fraction CO2	--

Certification Summary Information Report

Test Group		VKMXJ01.6P13			Evaporative/Refueling Family			VKMXR0135P1G		
Consolidated List of Standards										
Exhaust Standards										
Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			Federal Tier 3 Bin 30		
Fuel		Gasoline			Test Procedure			SC03		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	CO	--	--	--	--	--	--	0.22	99.999	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0036	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	99.999	
150,000 miles	NOX	--	--	--	--	--	--	0.0016	99.999	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			California LEV-IV SULEV30		
Fuel		Gasoline			Test Procedure			Federal fuel 2-day exhaust (w/can load)		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	CO	--	--	--	--	--	--	0.22	1.0	
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004	
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0036	99.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.030	
150,000 miles	NOX	--	--	--	--	--	--	0.0016	99.999	
150,000 miles	PM	--	--	--	--	--	--	0	0.001	

Certification Summary Information Report

Test Group		VKMXJ01.6P13			Evaporative/Refueling Family			VKMXR0135P1G	
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			Federal Tier 3 Bin 30	
Fuel		Gasoline			Test Procedure			Federal fuel 2-day exhaust (w/can load)	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	--	0.229467	999
120,000 miles	METHANE	--	--	--	--	--	--	0.0014	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.001	0.010
150,000 miles	CO	--	--	--	--	--	--	0.22	1.0
150,000 miles	CO-COMP	--	--	--	--	--	--	0	4.2
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0036	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.030
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	0	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0016	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			California LEV-IV SULEV30	
Fuel		Gasoline			Test Procedure			US06	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.22	9.6
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0036	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0016	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.006

Certification Summary Information Report

Test Group	VKMXJ01.6P13				Evaporative/Refueling Family			VKMXR0135P1G	
Cert Region	California + CAA Section 177 states				Cert/In-Use Code			Cert	
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)				Standard Level			California LEV-IV SULEV30	
Fuel	Gasoline				Test Procedure			Fed. fuel 50 F exh.	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
4,000 miles	CO	--	--	--	--	--	--	--	1.0
4,000 miles	HCHO	--	--	--	--	--	--	--	0.008
4,000 miles	NMOG	--	--	1.1	--	--	--	--	99.999
4,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.060
4,000 miles	NOX	--	--	--	--	--	--	--	99.999
Cert Region	Federal				Cert/In-Use Code			Cert	
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)				Standard Level			Federal Tier 3 Bin 30	
Fuel	Gasoline				Test Procedure			US06	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.22	99.999
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0036	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	99.999
150,000 miles	NOX	--	--	--	--	--	--	0.0016	99.999
150,000 miles	PM	--	--	--	--	--	--	0	0.006
Cert Region	California + CAA Section 177 states				Cert/In-Use Code			Cert	
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)				Standard Level			California LEV-IV SULEV30	
Fuel	Gasoline				Test Procedure			SC03	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.22	1.0
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0036	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0016	99.999

Certification Summary Information Report

Test Group		VKMXJ01.6P13			Evaporative/Refueling Family			VKMXR0135P1G	
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			Federal Tier 3 Bin 30	
Fuel		Gasoline			Test Procedure			HWFE	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	--	0.229467	999
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0036	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0016	99.999
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			California LEV-IV SULEV30	
Fuel		Gasoline			Test Procedure			Cold CO	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.07	12.5
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			Federal Tier 3 Bin 30	
Fuel		Gasoline			Test Procedure			Cold CO	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.07	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	0.0025	0.3
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			California LEV-IV SULEV30	
Fuel		Gasoline			Test Procedure			HWFE	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0036	99.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.030
150,000 miles	NOX	--	--	--	--	--	--	0.0016	99.999

Certification Summary Information Report

Test Group		VKMXJ01.6P13		Evaporative/Refueling Family		VKMXR0135P1G	
Evaporative/Refueling Standards							
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		Leak Test - Port Near Fuel Pipe					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	LEAK-DIA	--	0.020	0		
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Leak Test - Port Near Fuel Pipe					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	LEAK-DIA	--	0.02	0		
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		Leak Test - Port Near Canister					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	LEAK-DIA	--	0.020	0		
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Evap Canister Bleed Test					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL	--	0.020	0		
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		Evap Canister Bleed Test					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL	--	0.020	0		

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Test Group		VKMXJ01.6P13		Evaporative/Refueling Family		VKMXR0135P1G	
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Leak Test - Port Near Canister					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	LEAK-DIA	--	0.02	0		
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		California Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0		
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		CA fuel 3-day evap.					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.400	0		
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0		
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		California fuel 2-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.400	0		

Certification Summary Information Report

Test Group		VKMXJ01.6P13		Evaporative/Refueling Family		VKMXR0135P1G					
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		California + CAA Section 177 states					
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)					
Test Procedure		California fuel 2-day evap									
Fuel		Useful Life		Emission Name		Rounded Result		Std		Add DF	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		--		0.400		0	
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		California + CAA Section 177 states					
Cert/In-Use Code		Cert		Standard Level		California LEV-IV Zero Evap (Option 2)					
Test Procedure		California Fuel Running Loss									
Fuel		Useful Life		Emission Name		Rounded Result		Std		Add DF	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		--		0.01		0	
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		Federal					
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap					
Test Procedure		Federal fuel refueling test (ORVR)									
Fuel		Useful Life		Emission Name		Rounded Result		Std		Add DF	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		--		0.20		0	
Evaporative/Refueling Family		VKMXR0135P1G		Cert Region		Federal					
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap					
Test Procedure		CA fuel 3-day evap.									
Fuel		Useful Life		Emission Name		Rounded Result		Std		Add DF	
Gasoline		150,000 miles		HC-TOTAL-EQUIV		--		0.400		0	

Certification Summary Information Report

Test Group		VKMXJ01.6P13	Evaporative/Refueling Family	VKMXR0135P1G
Glossary				
Useful Life				
4	4,000 miles	120	120,000 miles	
50	50,000 miles	150	150,000 miles	
100	100,000 miles			
Emission Name				
HC-TOTAL	Total Hydrocarbon	COMB-CREE	Combined Carbon-Related Exhaust Emissions	
CO	Carbon Monoxide	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions	
CO2	Carbon dioxide	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only	
CREE	Carbon-Related Exhaust Emissions	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only	
OPT-CREE	Optional Carbon-Related Exhaust Emissions	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only	
NOX	Nitrogen Oxide	LEAK-DIA	Effective Leak Diameter (inches)	
PM	Particulate Matter	LEAK-GAS CAP	Gas Cap Leakage (cc/min)	
PM-COMP	SFTP Composite Particulate Matter	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only	
HC-NM	Non-methane Hydrocarbon	KW-HRS	Integrated DC KW-HRS	
OMHCE	Organic material Hydrocarbon Equivalent	CH4 BAG 1	Bag 1 Methane	
OMNMHCE	Organic material non-methane HC equivalent	CH4 BAG 2	Bag 2 Methane	
NMOG	Non-methane organic gases	CH4 BAG 3	Bag 3 Methane	
HCHO	Formaldehyde	CH4 BAG 4	Bag 4 Methane	
H3C2HO	Acetaldehyde	CO BAG 1	Bag 1 Carbon Monoxide	
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	CO BAG 2	Bag 2 Carbon Monoxide	
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	CO BAG 3	Bag 3 Carbon Monoxide	
CO-COMP	SFTP Composite Carbon Monoxide	CO BAG 4	Bag 4 Carbon Monoxide	
ETHANOL	C2H5OH - Ethanol	NMOG BAG 1	Bag 1 Non-methane organic gases	
FE BAG 1	Bag 1 Fuel Economy	NMOG BAG 2	Bag 2 Non-methane organic gases	
FE BAG 2	Bag 2 Fuel Economy	NMOG BAG 3	Bag 3 Non-methane organic gases	
FE BAG 3	Bag 3 Fuel Economy	NMOG BAG 4	Bag 4 Non-methane organic gases	
FE BAG 4	Bag 4 Fuel Economy	ACT-DISTANCE BAG 1	Bag 1 Actual Distance	
MFR FE	Manufacturer Fuel Economy	ACT-DISTANCE BAG 2	Bag 2 Actual Distance	
HC	Hydrocarbon for Running Loss and ORVR	ACT-DISTANCE BAG 3	Bag 3 Actual Distance	
METHANE	CH4 - Methane	ACT-DISTANCE BAG 4	Bag 4 Actual Distance	
METHANOL	CH3OH - Methanol	HC-TOTAL BAG 1	Bag 1 Total Hydrocarbon	
N2O	Nitrous Oxide	HC-TOTAL BAG 2	Bag 2 Total Hydrocarbon	
SPITBACK	Spitback Hydrocarbon in grams	HC-TOTAL BAG 3	Bag 3 Total Hydrocarbon	
AMP-HRS	Integrated Amp-hours	HC-TOTAL BAG 4	Bag 4 Total Hydrocarbon	
START-SOC	System Start State of Charge Watt-hours	WATT-HRS BAG 1	Bag 1 Watt Hours	
END-SOC	System End State of Charge Watt-hours	WATT-HRS BAG 2	Bag 2 Watt Hours	

Certification Summary Information Report

Test Group		VKMXXJ01.6P13	Evaporative/Refueling Family		VKMXR0135P1G
ACT-DISTANCE	Actual Distance Driven (miles)		WATT-HRS BAG 3	Bag 3 Watt Hours	
AS-VOLT	Average System Voltage		WATT-HRS BAG 4	Bag 4 Watt Hours	
CO2 BAG 1	Bag 1 Carbon Dioxide		WATT-HRS	Watt Hours	
CO2 BAG 2	Bag 2 Carbon Dioxide		HC-NM BAG 1	Bag 1 Non-methane Hydrocarbon	
CO2 BAG 3	Bag 3 Carbon Dioxide		HC-NM BAG 2	Bag 2 Non-methane Hydrocarbon	
CO2 BAG 4	Bag 4 Carbon Dioxide		HC-NM BAG 3	Bag 3 Non-methane Hydrocarbon	
NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides		HC-NM BAG 4	Bag 4 Non-methane Hydrocarbon	
NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides		N2O BAG 1	Bag 1 Nitrous Oxide	
DT-IWRR	Drive Trace Inertia Work Ratio Rating		N2O BAG 2	Bag 2 Nitrous Oxide	
DT-ASCR	Drive Trace Absolute Speed Change Rating		N2O BAG 3	Bag 3 Nitrous Oxide	
DT-EER	Drive Trace Energy Economy Rating		N2O BAG 4	Bag 4 Nitrous Oxide	
Certification Region					
CA	California + CAA Section 177 states		FA	Federal	
Exhaust Emission Standard Level					
B1	Federal Tier 2 Bin 1		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
B2	Federal Tier 2 Bin 2		HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
B3	Federal Tier 2 Bin 3		HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
B4	Federal Tier 2 Bin 4		HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
B5	Federal Tier 2 Bin 5		HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
B6	Federal Tier 2 Bin 6		HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
B7	Federal Tier 2 Bin 7		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
B8	Federal Tier 2 Bin 8		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
B9	Federal Tier 2 Bin 9		HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
B10	Federal Tier 2 Bin 10		HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
B11	Federal Tier 2 Bin 11		HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
L2	California LEV-II LEV		L4SULEV100	California LEV-IV SULEV100	
L2OP	California LEV-II LEV Optional		L4SULEV125	California LEV-IV SULEV125	
U2	California LEV-II ULEV		L4SULEV15	California LEV-IV SULEV15	
S2	California LEV-II SULEV		L4SULEV150	California LEV-IV SULEV150	
ZEV	California ZEV		L4SULEV170	California LEV-IV SULEV170	
OT	Other		L4SULEV175	California LEV-IV SULEV175	
T1	Federal Tier 1		L4SULEV20	California LEV-IV SULEV20	
PZEV	California PZEV		L4SULEV200	California LEV-IV SULEV200	
L2LEV160	California LEV-II LEV160		L4SULEV230	California LEV-IV SULEV230	
L2ULEV125	California LEV-II ULEV125		L4SULEV25	California LEV-IV SULEV25	
L2SULEV30	California LEV-II SULEV30		L4SULEV30	California LEV-IV SULEV30	
L2LEV395	California LEV-II LEV395		L4SULEV75	California LEV-IV SULEV75	

Certification Summary Information Report

Test Group		VKMXJ01.6P13	Evaporative/Refueling Family		VKMXR0135P1G
L2ULEV340	California LEV-II ULEV340		L4SULEV85	California LEV-IV SULEV85	
L2LEV630	California LEV-II LEV630		L4ULEV125	California LEV-IV ULEV125	
L2ULEV570	California LEV-II ULEV570		L4ULEV200	California LEV-IV ULEV200	
L3LEV160	California LEV-III LEV160		L4ULEV250	California LEV-IV ULEV250	
L3ULEV125	California LEV-III ULEV125		L4ULEV270	California LEV-IV ULEV270	
L3ULEV70	California LEV-III ULEV70		L4ULEV40	California LEV-IV ULEV40	
L3ULEV50	California LEV-III ULEV50		L4ULEV400	California LEV-IV ULEV400	
L3SULEV30	California LEV-III SULEV30		L4ULEV50	California LEV-IV ULEV50	
L3SULEV20	California LEV-III SULEV20		L4ULEV60	California LEV-IV ULEV60	
L3LEV395	California LEV-III LEV395		L4ULEV70	California LEV-IV ULEV70	
L3ULEV340	California LEV-III ULEV340		T4B170	Federal Tier 4 MDV Bin 170	
L3ULEV250	California LEV-III ULEV250		T4B150	Federal Tier 4 MDV Bin 150	
L3ULEV200	California LEV-III ULEV200		T4B125	Federal Tier 4 MDV Bin 125	
L3SULEV170	California LEV-III SULEV170		T4B100	Federal Tier 4 MDV Bin 100	
L3SULEV150	California LEV-III SULEV150		T4B85	Federal Tier 4 MDV Bin 85	
L3LEV630	California LEV-III LEV630		T4B75	Federal Tier 4 MDV Bin 75	
L3ULEV570	California LEV-III ULEV570		T4B70	Federal Tier 4 Bin 70	
L3ULEV400	California LEV-III ULEV400		T4B65	Federal Tier 4 Bin 65	
L3ULEV270	California LEV-III ULEV270		T4B60	Federal Tier 4 Bin 60	
L3SULEV230	California LEV-III SULEV230		T4B55	Federal Tier 4 Bin 55	
L3SULEV200	California LEV-III SULEV200		T4B50	Federal Tier 4 Bin 50	
T3B160	Federal Tier 3 Bin 160		T4B45	Federal Tier 4 Bin 45	
T3B125	Federal Tier 3 Bin 125		T4B40	Federal Tier 4 Bin 40	
T3B110	Federal Tier 3 Transitional Bin 110		T4B35	Federal Tier 4 Bin 35	
T3B85	Federal Tier 3 Transitional Bin 85		T4B30	Federal Tier 4 Bin 30	
T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover		T4B25	Federal Tier 4 Bin 25	
T3B70	Federal Tier 3 Bin 70		T4B20	Federal Tier 4 Bin 20	
T3B50	Federal Tier 3 Bin 50		T4B15	Federal Tier 4 Bin 15	
T3B30	Federal Tier 3 Bin 30		T4B10	Federal Tier 4 Bin 10	
T3B20	Federal Tier 3 Bin 20		T4B5	Federal Tier 4 Bin 5	
T3B0	Federal Tier 3 Bin 0		T4B0	Federal Tier 4 Bin 0	
HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395				
Transmission Type Code					
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual		
A	Automatic	OT	Other		
AM	Automated Manual	SA	Semi-Automatic		
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)		
Drive System Code					
4	4-Wheel Drive	P	Part-time 4-Wheel Drive		

Certification Summary Information Report

Test Group		VKMXJ01.6P13	Evaporative/Refueling Family		VKMXR0135P1G
F	2-Wheel Drive, Front		A	All Wheel Drive	
R	2-Wheel Drive, Rear				
Additional Terms and Acronyms					
AFC	Alternative Fuel Converter		ICI	Independent Commercial Importer	
CSI	Certificate Summary Information		ORVR	Onboard Refueling Vapor Recovery	
DF	Deterioration Factor		SIL	Shift Indicator Light	
Evap	Evaporation, Evaporative		Trans	Transmission	